CD27 for IHC Antibody / Tumor necrosis factor receptor superfamily member 7 [clone MSVA-027M] (V6146)

Catalog No.	Formulation	Size
V6146-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6146-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	MSVA-027M
Purity	Protein A affinity
UniProt	P26842
Localization	Membrane
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This CD27/Tumor necrosis factor receptor superfamily member 7 antibody is available for research use only.
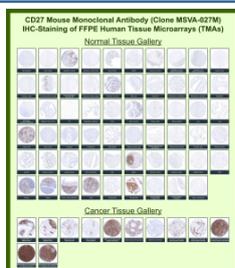
Immunohistochemistry analysis of CD27 for IHC Antibody in FFPE human tissue microarrays (TMAs). CD27 Antibody (clone MSVA-027M) demonstrates membranous HRP-DAB brown staining in lymphocyte-rich tissues including tonsil, lymph node, spleen, and thymus, consistent with CD27 expression on activated and memory T and B lymphocytes. Most non-lymphoid tissues show absent or minimal staining, supporting expected tissue-restricted expression. In cancer tissue arrays, CD27-positive tumor-infiltrating lymphocytes are observed in multiple malignancies, while strong staining is seen in lymphoid neoplasms consistent with B-cell lineage origin. The overall immunohistochemical pattern aligns with publicly available expression profiles, including data reported in the Human Protein Atlas.

Description

CD27 for IHC Antibody recognizes CD27, also known as Tumor necrosis factor receptor superfamily member 7

(TNFRSF7), a type I transmembrane glycoprotein and member of the tumor necrosis factor receptor superfamily. CD27 is expressed primarily on subsets of T lymphocytes, memory B cells, plasma cells, and natural killer cells, where it functions as a costimulatory receptor involved in adaptive immune responses. The CD27 for IHC Antibody is useful for identifying activated and memory lymphocyte populations in formalin-fixed, paraffin-embedded tissues.

CD27, also referred to as TNFRSF7 antibody and S152 antibody in the literature, plays a central role in T cell activation, survival, and differentiation through interaction with its ligand CD70. Engagement of CD27 promotes NF-kappaB signaling and enhances lymphocyte proliferation and cytokine production. CD27 expression is tightly regulated during lymphocyte maturation, being present on naive T cells and retained on memory T cells, while its expression pattern in B cells reflects differentiation status. In human lymphoid tissues such as tonsil and lymph node, CD27 highlights interfollicular T cells and subsets of germinal center-associated lymphocytes.

The CD27 protein contains extracellular cysteine-rich domains characteristic of TNF receptor family members, a transmembrane domain, and an intracellular signaling region that recruits TRAF adaptor proteins. CD27 signaling contributes to the generation and maintenance of long-lived memory T cells and plasma cells. Dysregulation of CD27 expression or signaling has been associated with immunodeficiency states, chronic infection, and lymphoid malignancies. Chromosomally, the TNFRSF7 gene is located on human chromosome 12p13.31, and CD27 localizes predominantly to the plasma membrane where it mediates cell-cell interactions within secondary lymphoid organs. In routine histologic evaluation, CD27 for IHC Antibody can aid in the characterization of lymphoid architecture and the assessment of reactive versus neoplastic lymphoid populations. A CD27 antibody is commonly applied in research settings to study lymphocyte activation, differentiation pathways, and immune microenvironment composition in both normal and diseased tissues. Clone MSVA-027M is a mouse monoclonal antibody designed to target CD27 in research applications.

Application Notes

1. Optimal dilution of the CD27/Tumor necrosis factor receptor superfamily member 7 antibody should be determined by the researcher.

2. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

Recombinant human CD27 protein fragment (amino acids 28-170) (exact sequence is proprietary) was used as the immunogen for the CD27/Tumor necrosis factor receptor superfamily member 7 antibody.

Storage

CD27/Tumor necrosis factor receptor superfamily member 7 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.